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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,648	06/13/2001	James H. Prestegard	04342.105053	5893
20786	7590	10/06/2003	EXAMINER	
KING & SPALDING			CLOW, LORI A	
191 PEACHTREE STREET, N.E.			ART UNIT	
ATLANTA, GA 30303-1763			PAPER NUMBER	

1631

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,648

Applicant(s)

PRESTEGARD ET AL.

Examiner

Lori A. Clow, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-16 and 19-20, drawn to a method for improving binding affinity of a ligand for a biological target by preparing NMR spectra of two complexes and then analyzing the spectra, classified in class 702, subclass 19.
- II. Claims 17-18, drawn to a method for improving binding affinity of a ligand for a biological target by preparing NMR spectra and identifying peaks, classified in class 702, subclass 22.
- III. Claims 21-25, drawn to a method for increasing the binding affinity of two or more ligands by deducing distances between the ligands, classified in class 702, subclass 127.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Group I, II, and III are unrelated because they are all drawn to different methods. The invention Group I is not related to the invention of Group II because in Group I the methods steps require that NMR spectra be prepared for two complexes and then the spectra are analyzed to determine whether the second ligand binds to the biological target within a paramagnetic zone. In the invention of Group II, however, the steps require that NMR spectra are prepared for a first complex and a second complex and that a peak is identified that is

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perturbed by a paramagnetic label for the first complex and the potentially the second complex.

These are vastly different inventions with different method steps and outcomes.

The invention of Group I is not related to the invention of Group III because they both require different method steps. For instance, in Group I the methods steps require that NMR spectra be prepared for two complexes and then the spectra are analyzed to determine whether the second ligand binds to the biological target within a paramagnetic zone. The invention of Group III requires that binding affinity be increased and not simply improved. The steps leading to this outcome are different in that distances between ligands are calculated from NMR spectra.

The inventions of Group II and III are not related. The invention of Group II requires that NMR spectra are prepared for a first complex and a second complex and that a peak is identified that is perturbed by a paramagnetic label for the first complex and the potentially the second complex. The invention of Group III requires that binding affinity be increased and not simply improved. The steps leading to this outcome are different in that distances between ligands are calculated from NMR spectra. These are vastly different inventions with different method steps and outcomes.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D. whose telephone number is 703-306-5439. The examiner can normally be reached on Monday thru Friday, 10:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 703-308-4028. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Lori A. Clow
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MARJORIE MORAN
PATENT EXAMINER

Marjorie A. Moran